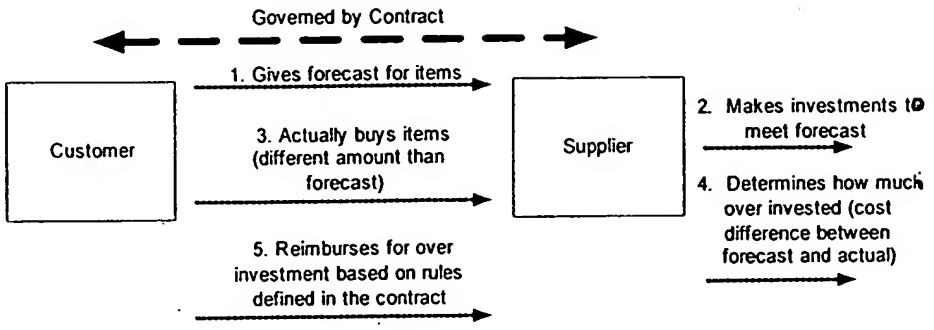


Figure 1A

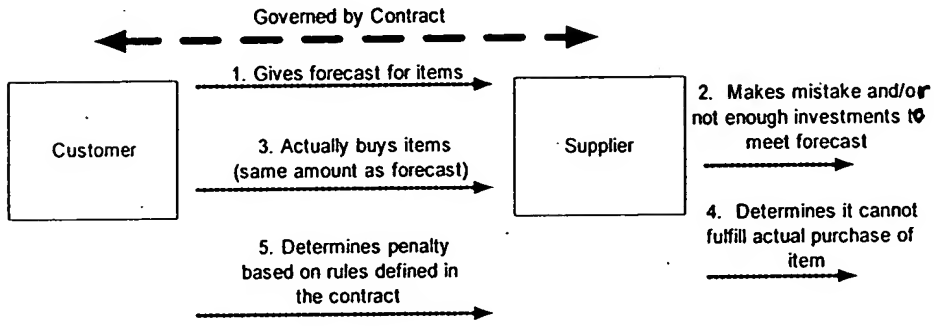


Figure 1B

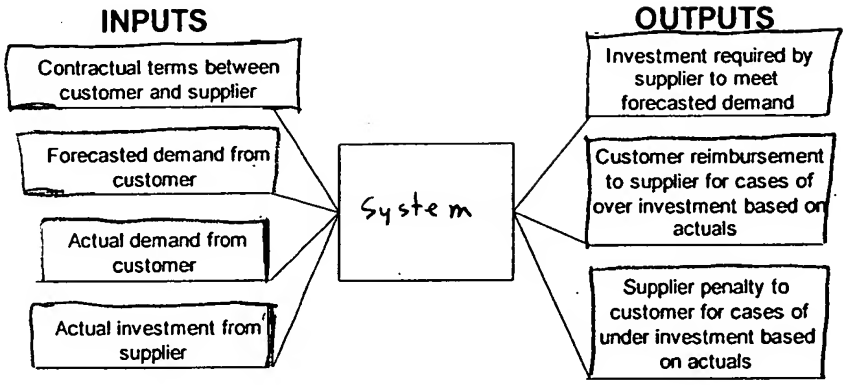
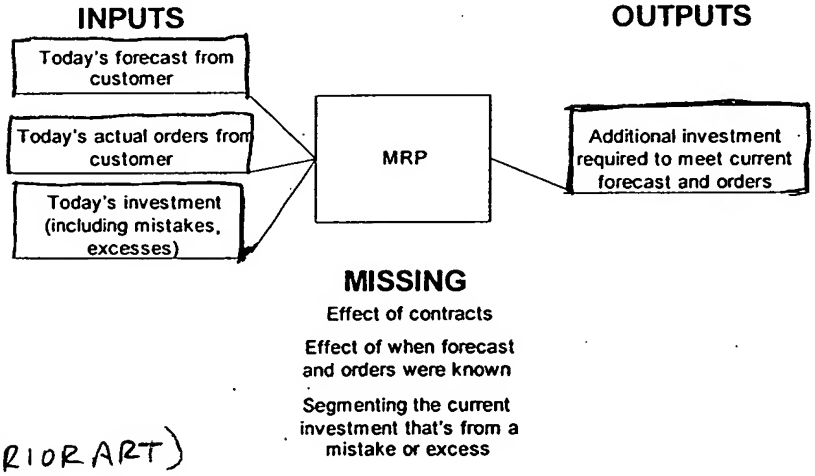
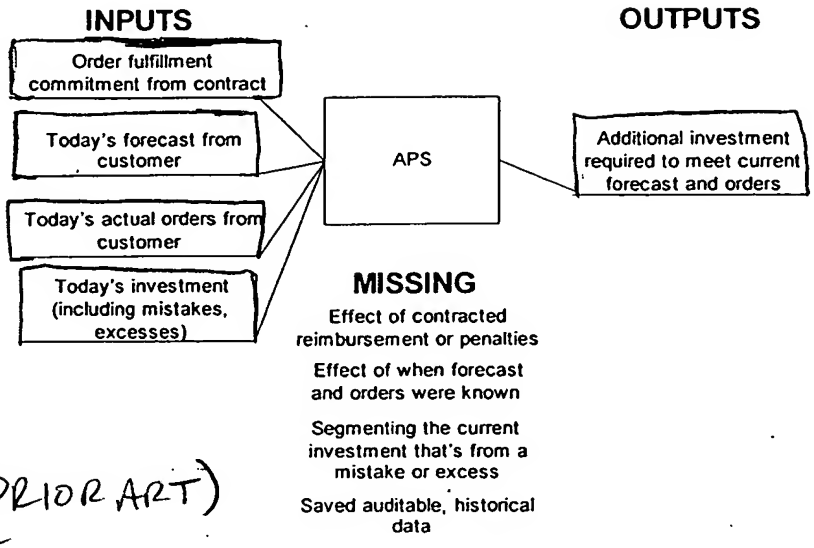


Figure 1C



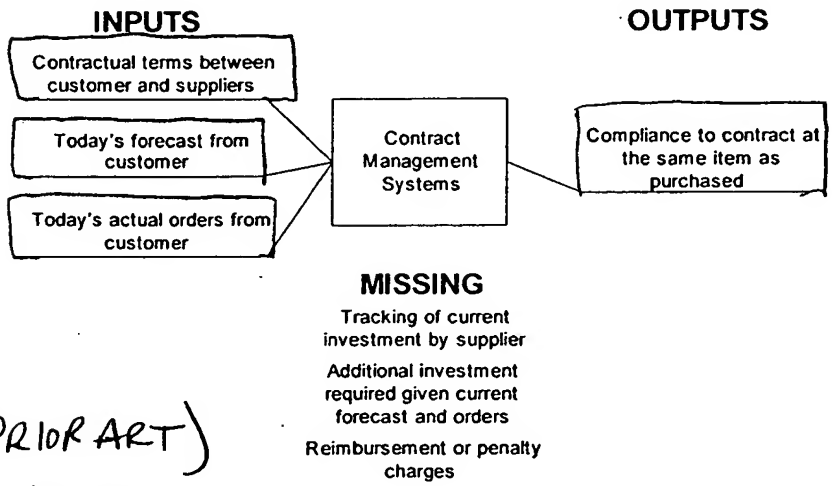
(PRIOR ART)

Figure 1D



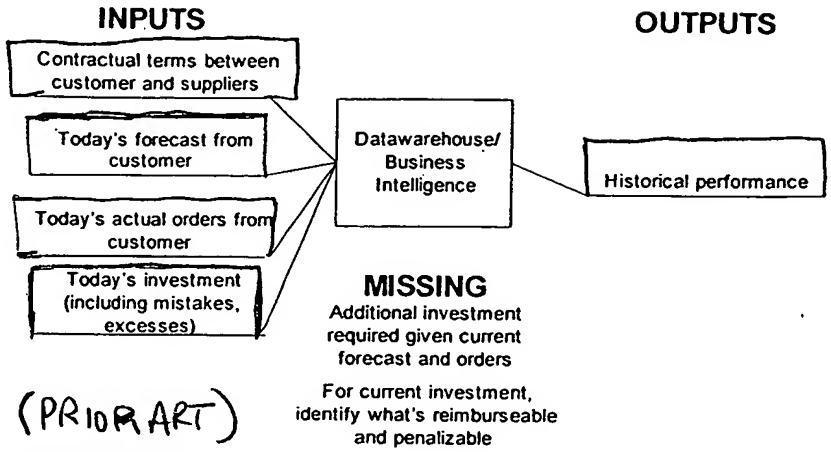
(PRIOR ART)

Figure 1E



(PRIOR ART)

Figure 1F



(PRIOR ART)

Figure 1G

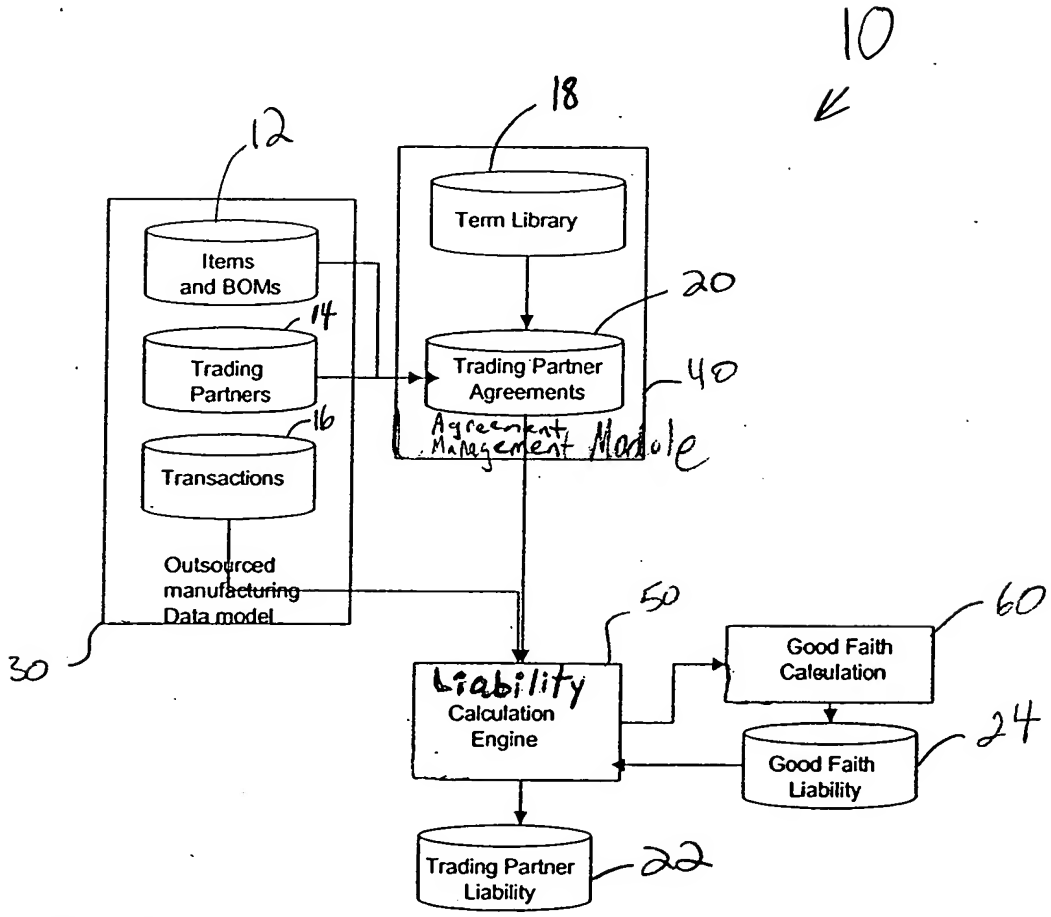


Figure 2

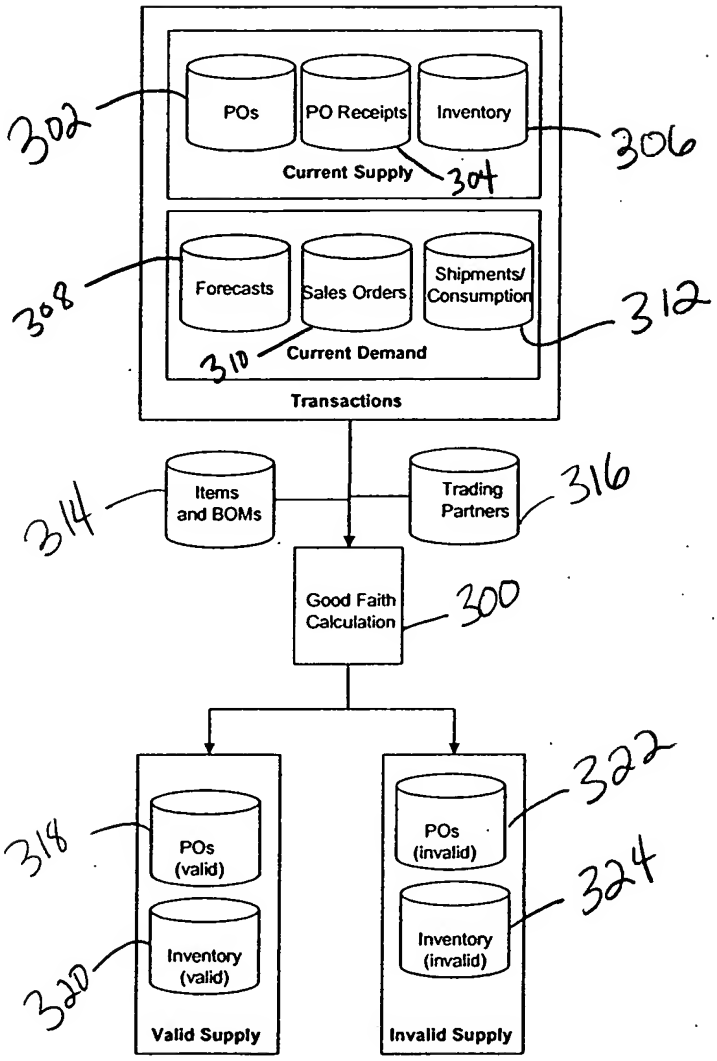

302
POs
PO Receipts
Inventory
306
Current Supply
304
308
Forecasts
Sales Orders
Shipments/ Consumption
312
310
Current Demand
Transactions
314
Items and BOMs
Trading Partners
316
Good Faith Calculation
300
318
POs (valid)
320
Inventory (valid)
Valid Supply
322
POs (invalid)
324
Inventory (invalid)
Invalid Supply

Figure 3

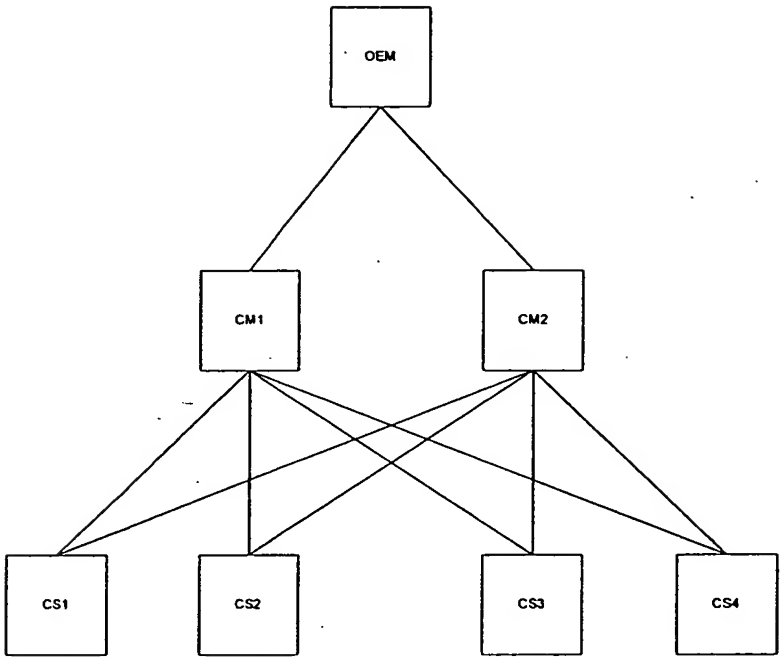


Figure 4

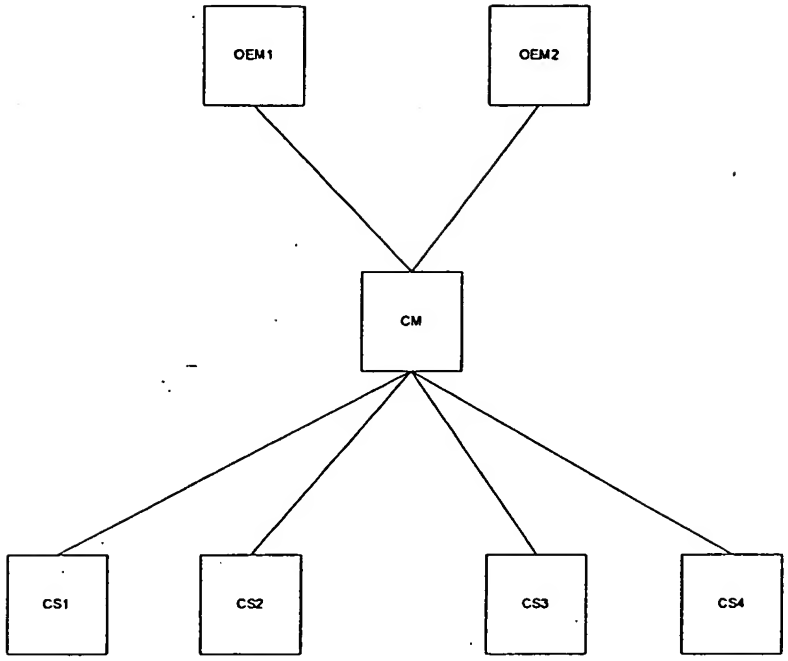


Figure 5

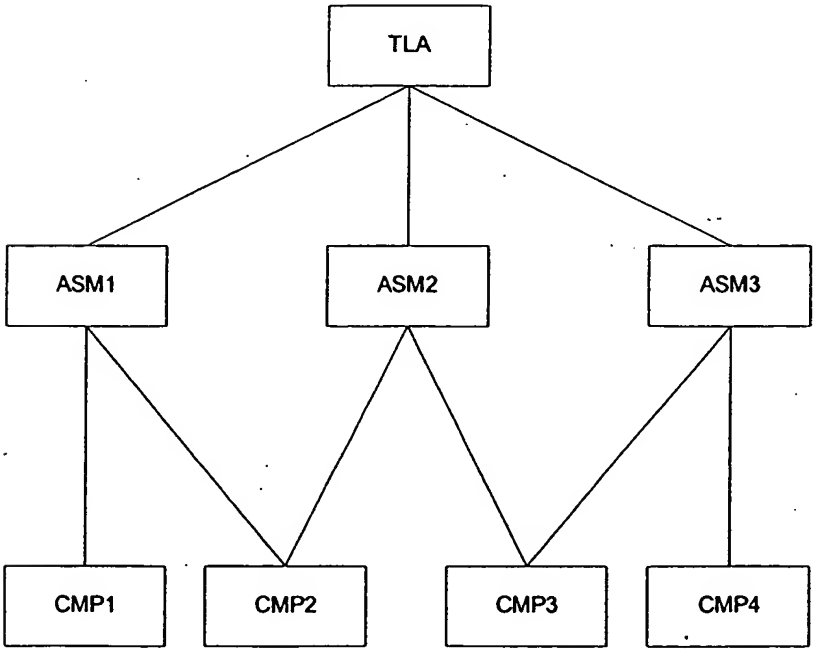


Figure 6

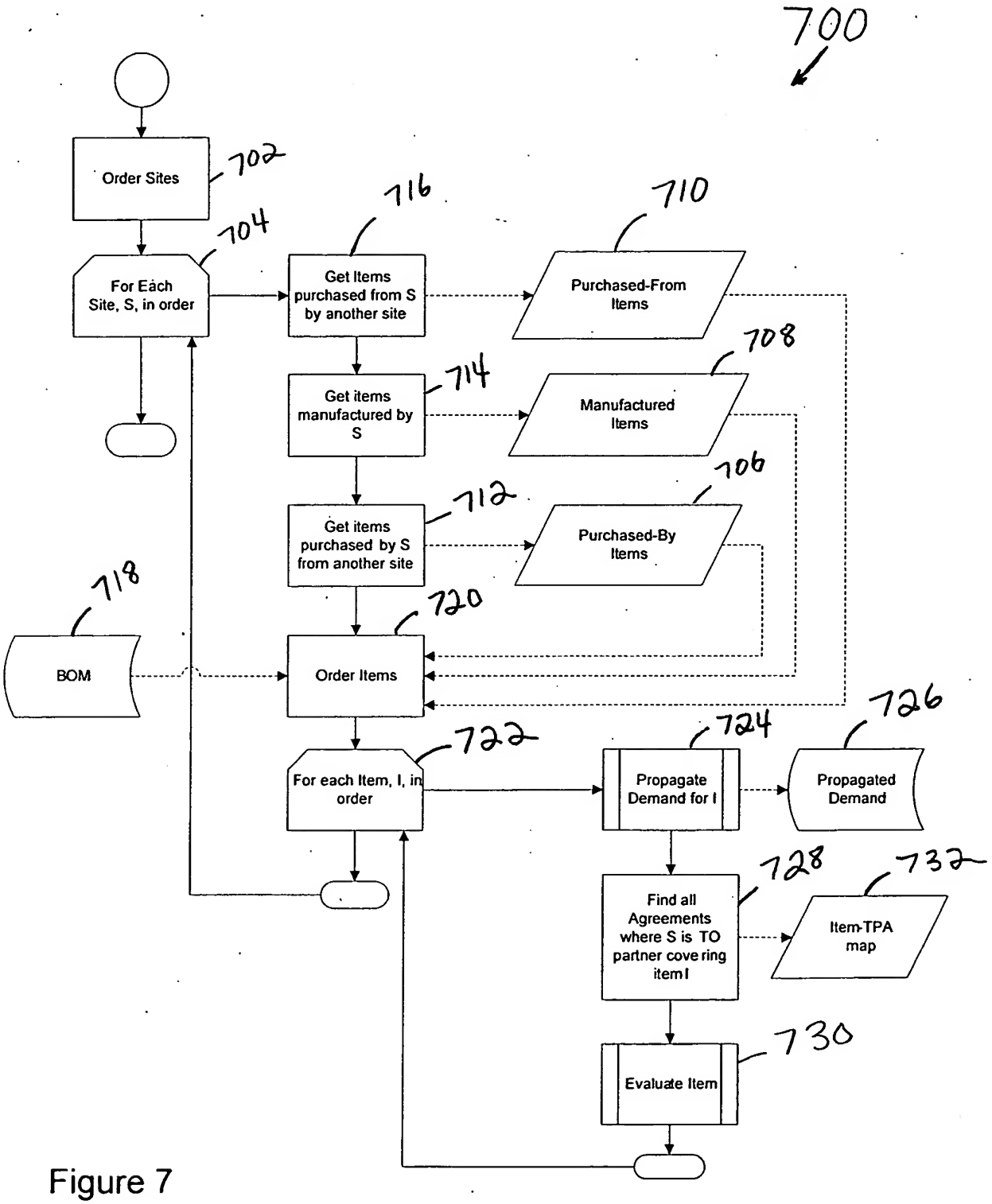

700
Order Sites
702
For Each Site, S, in order
704
Get Items purchased from S by another site
716
Purchased-From Items
710
Get items manufactured by S
714
Manufactured Items
708
Get items purchased by S from another site
712
Purchased-By Items
706
BOM
718
Order Items
720
For each Item, I, in order
722
Propagate Demand for I
724
Propagated Demand
726
Find all Agreements where S is TO partner covering item I
728
Item-TPA map
732
Evaluate Item
730

Figure 7

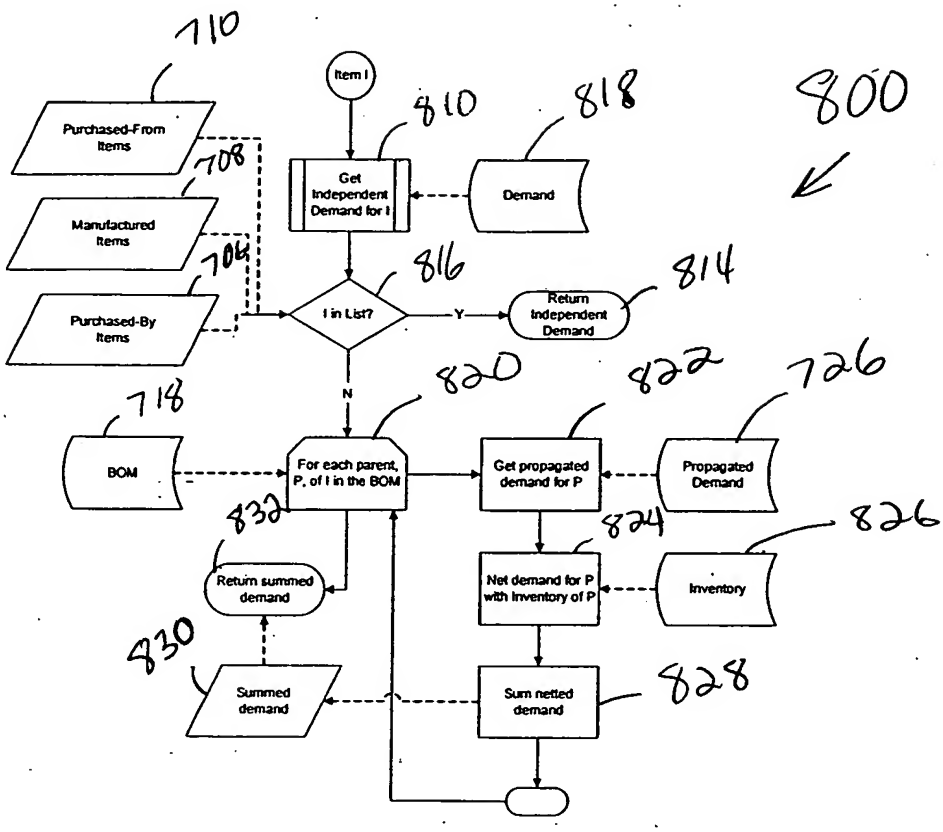

710
Item I
810
818
800
Purchased-From Items
708
Get Independent Demand for I
Demand
Manufactured Items
704
816
814
Purchased-By Items
I in List?
Y
Return Independent Demand
N
820
822
726
718
BOM
For each parent, P, of I in the BOM
Get propagated demand for P
Propagated Demand
832
824
826
Return summed demand
Net demand for P with Inventory of P
Inventory
830
Summed demand
Sum netted demand
828

Figure 8

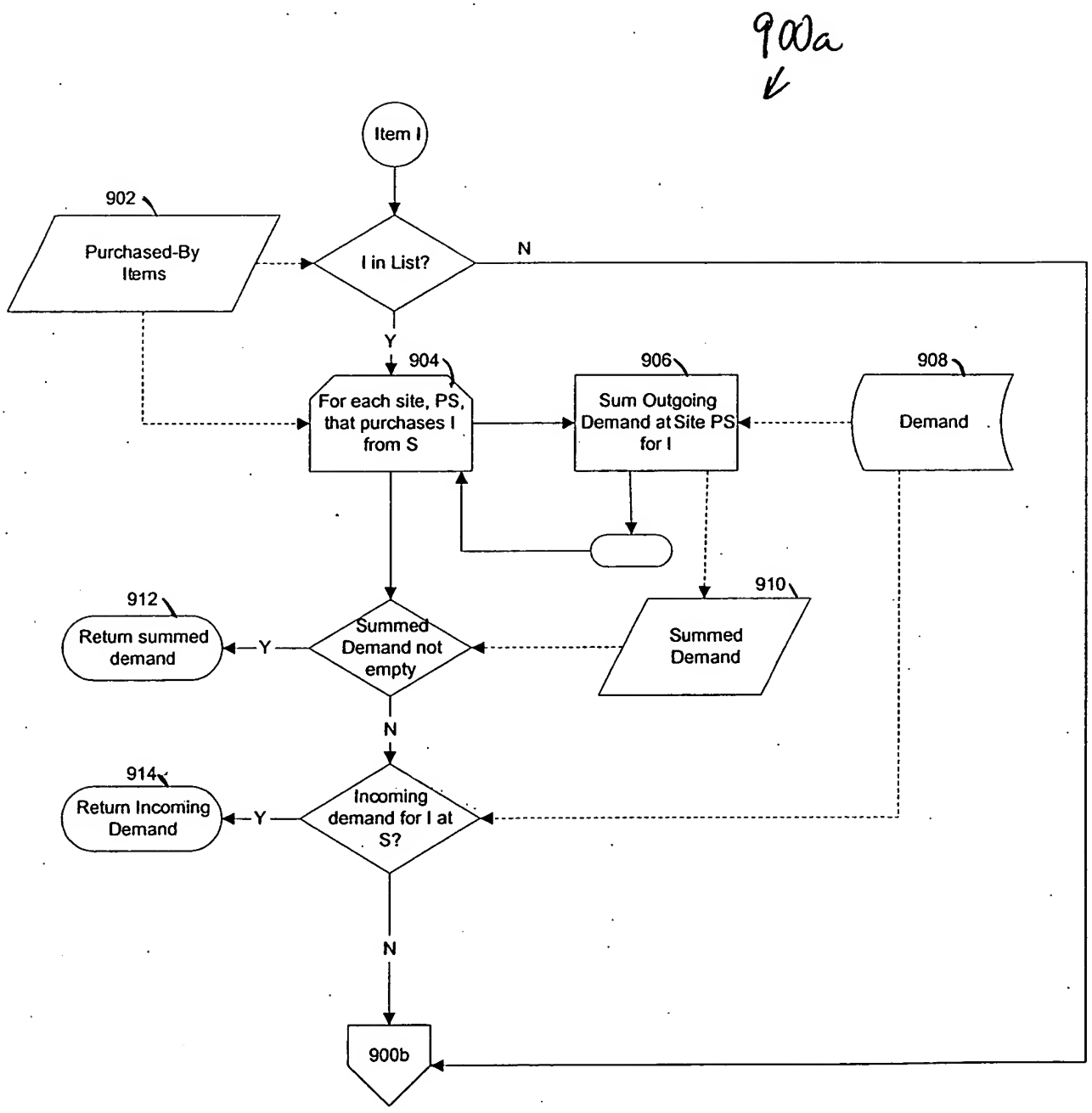
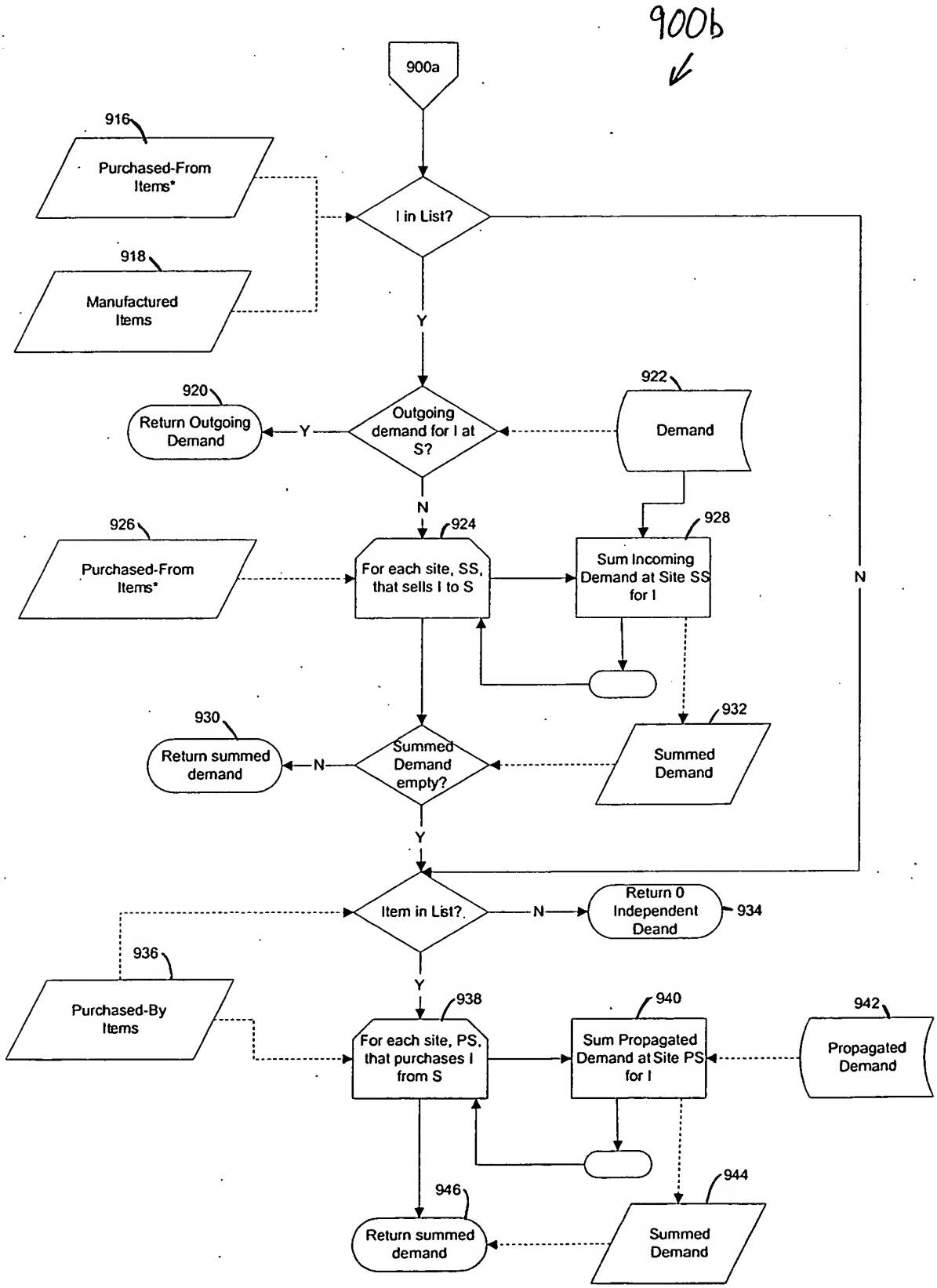

900a
Item I
902
Purchased-By Items
I in List?
N
Y
904
For each site, PS, that purchases I from S
906
Sum Outgoing Demand at Site PS for I
908
Demand
912
Return summed demand
Y
Summed Demand not empty
910
Summed Demand
N
914
Return Incoming Demand
Y
Incoming demand for I at S?
N
900b

Figure 9a

Figure 9b


900b
900a
916
Purchased-From Items*
I in List?
918
Manufactured Items
Y
920
Return Outgoing Demand
Y
Outgoing demand for I at S?
922
Demand
N
926
Purchased-From Items*
924
For each site, SS, that sells I to S
928
Sum Incoming Demand at Site SS for I
N
930
Return summed demand
N
Summed Demand empty?
932
Summed Demand
Y
Item in List?
N
Return 0 Independent Deand
934
936
Purchased-By Items
Y
938
For each site, PS, that purchases I from S
940
Sum Propagated Demand at Site PS for I
942
Propagated Demand
946
Return summed demand
944
Summed Demand

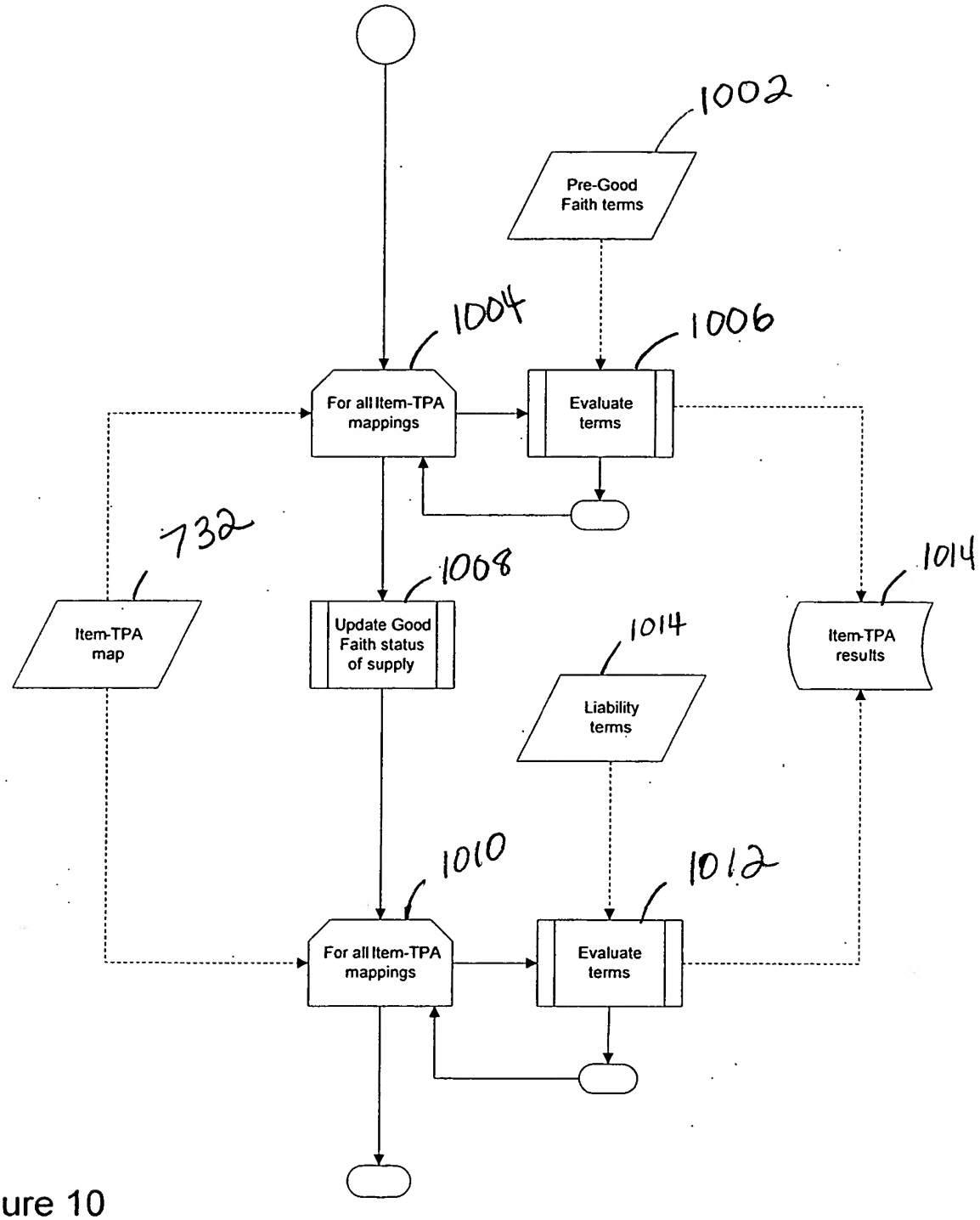

1002
Pre-Good Faith terms
1004
1006
For all Item-TPA mappings
Evaluate terms
732
1008
1014
Item-TPA map
Update Good Faith status of supply
1014
Item-TPA results
Liability terms
1010
1012
For all Item-TPA mappings
Evaluate terms

Figure 10

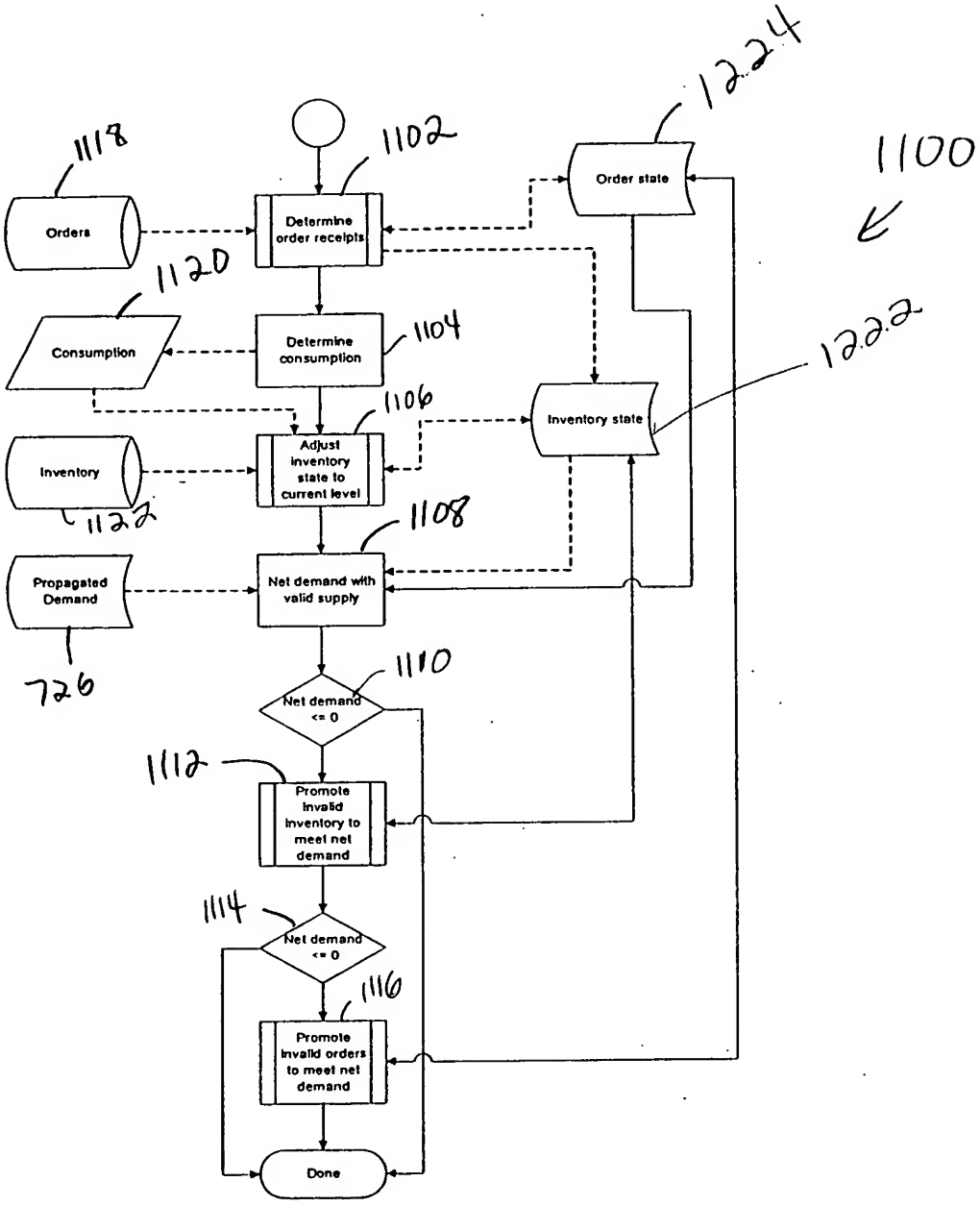

1224
1100
1118
1102
Orders
Determine order receipts
Order state
1120
Consumption
Determine consumption
1104
1222
1106
Inventory state
Adjust inventory state to current level
Inventory
1122
1108
Propagated Demand
Net demand with valid supply
726
1110
Net demand <= 0
1112
Promote invalid inventory to meet net demand
1114
Net demand <= 0
1116
Promote invalid orders to meet net demand
Done

Figure 11

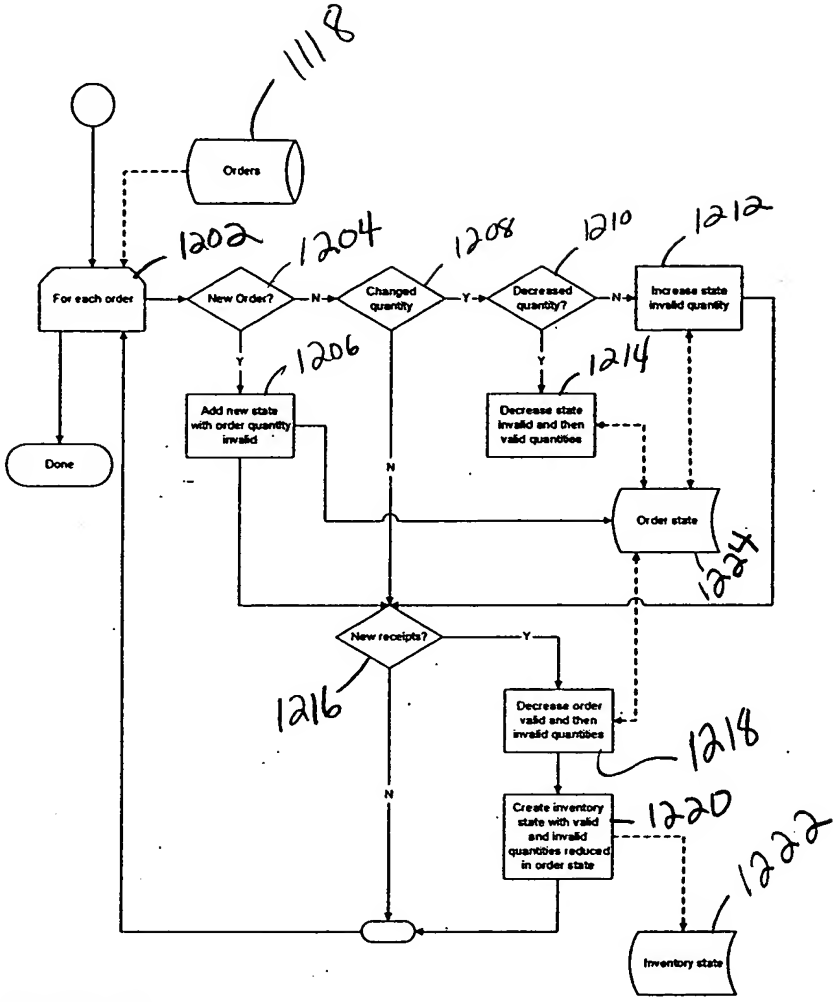

1118
Orders
1202
1202
For each order
1204
New Order?
1208
Changed quantity
1210
Decreased quantity?
1212
Increase state invalid quantity
N
Y
1206
Add new state with order quantity invalid
1214
Decrease state invalid and then valid quantities
Done
N
Order state
1224
New receipts?
Y
1216
Decrease order valid and then invalid quantities
1218
N
Create inventory state with valid and invalid quantities reduced in order state
1220
1222
Inventory state

Figure 12

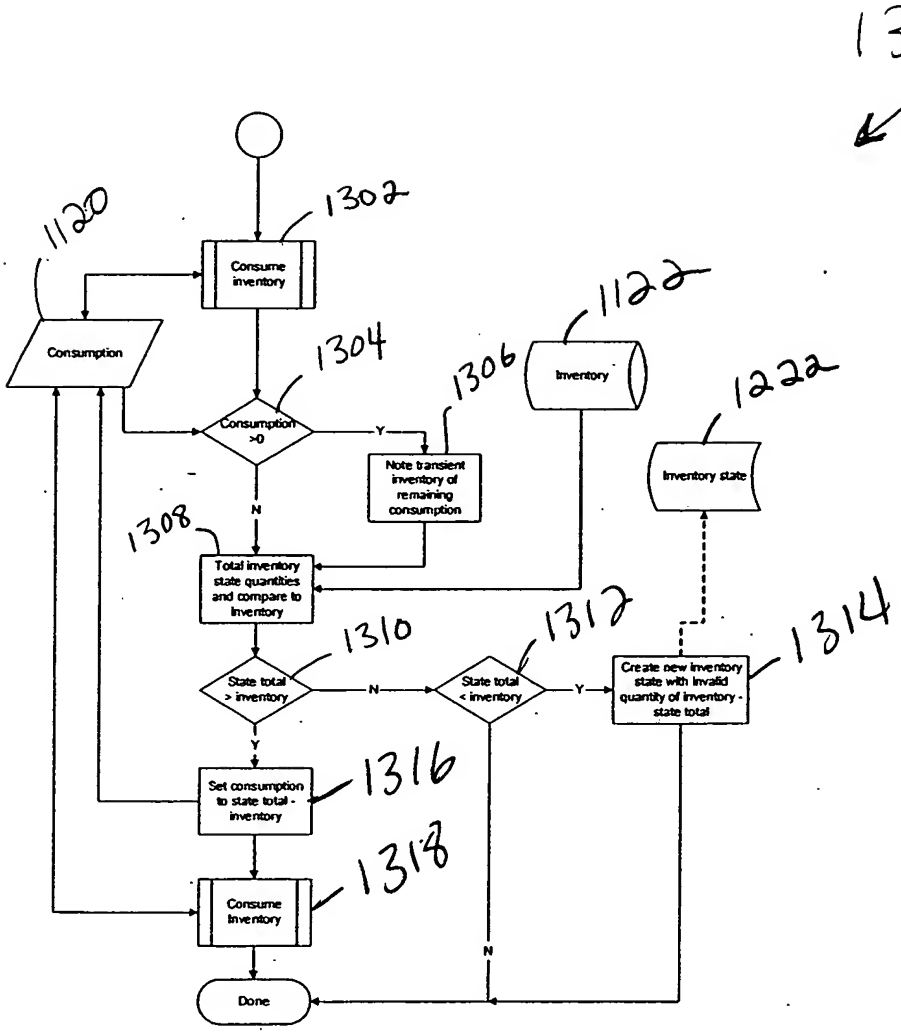

1300
1120
1302
Consume inventory
Consumption
1304
1306
1122
Inventory
Consumption >0
Y
Note transient inventory of remaining consumption
1222
Inventory state
N
1308
Total inventory state quantities and compare to Inventory
1310
1312
1314
State total > inventory
N
State total < inventory
Y
Create new inventory state with invalid quantity of inventory - state total
Y
1316
Set consumption to state total - inventory
1318
Consume Inventory
N
Done

Figure 13

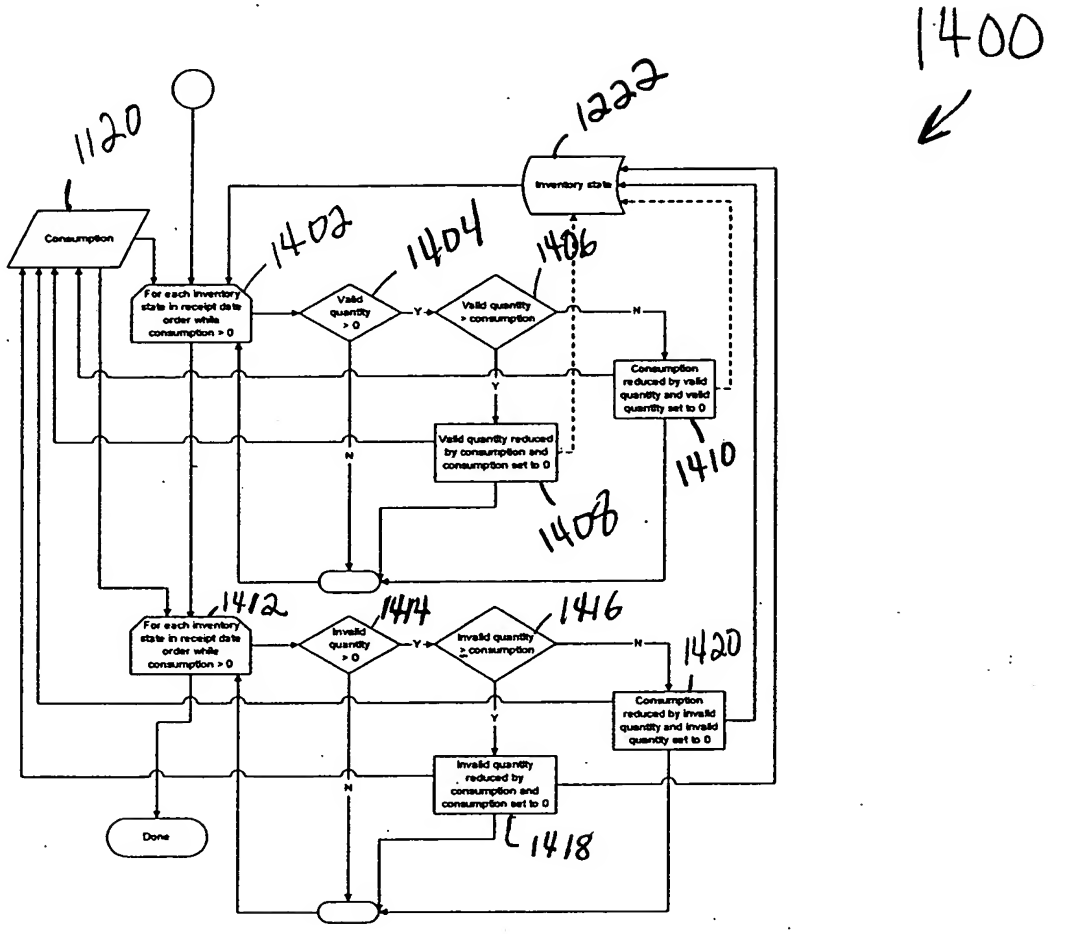


Figure 14

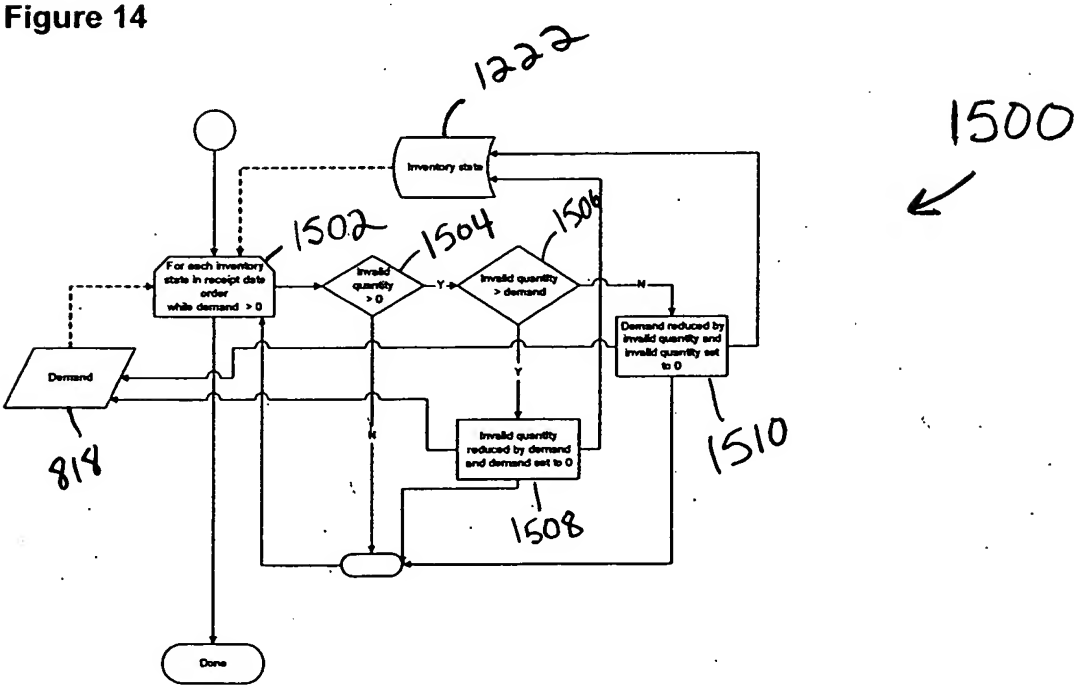


Figure 15

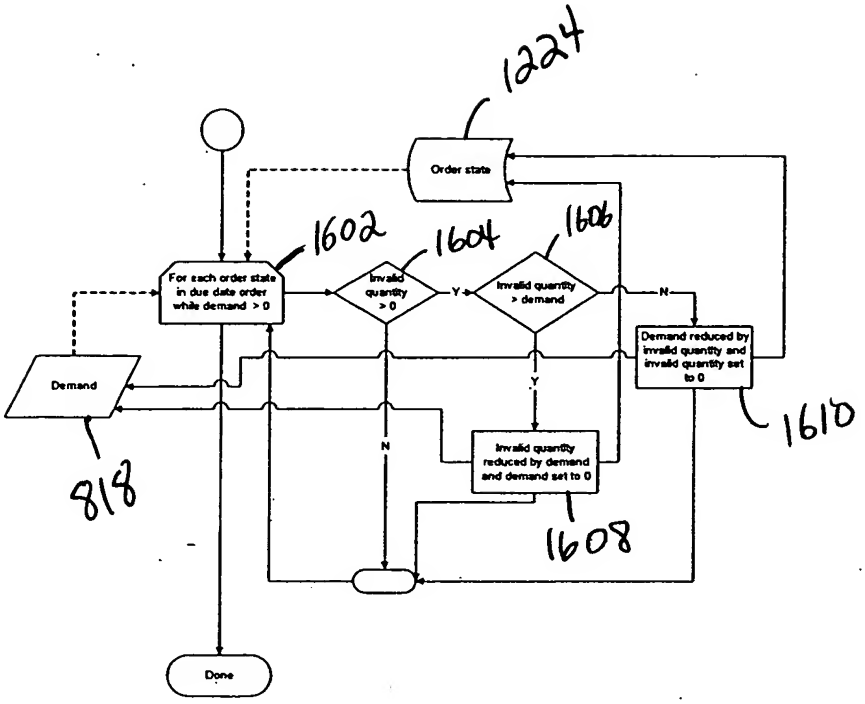

1600
1224
Order state
1602
For each order state in due date order while demand > 0
1604
Invalid quantity > 0
Y
1606
Invalid quantity > demand
N
Demand reduced by invalid quantity and invalid quantity set to 0
1610
Demand
818
Y
N
Invalid quantity reduced by demand and demand set to 0
1608
Done

Figure 16

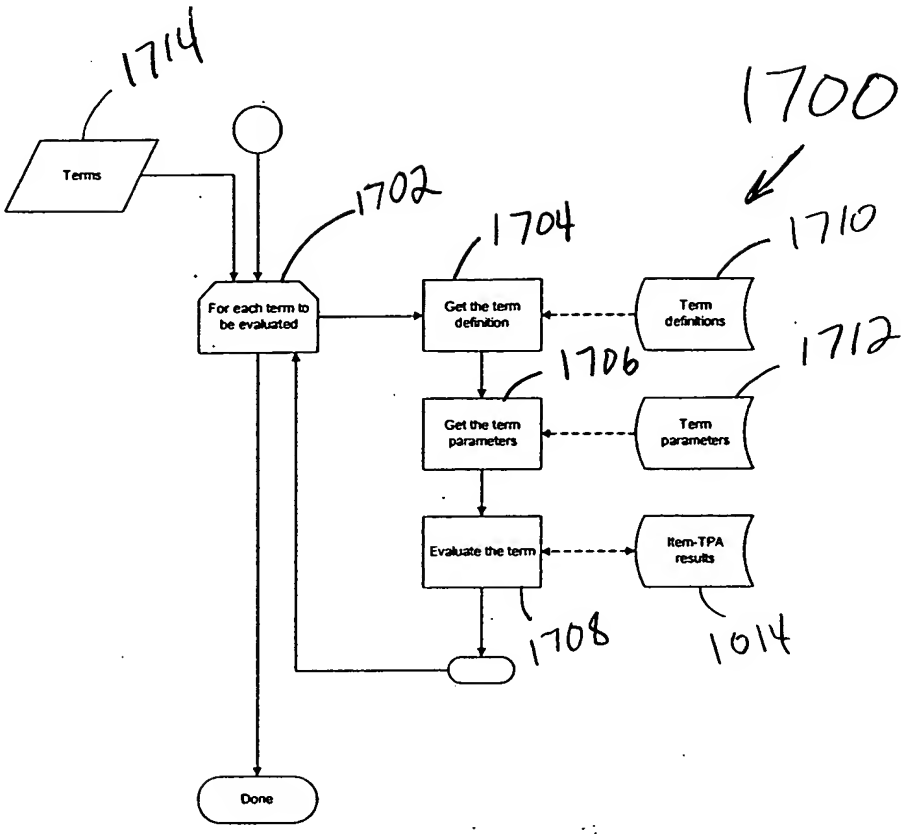


Figure 17

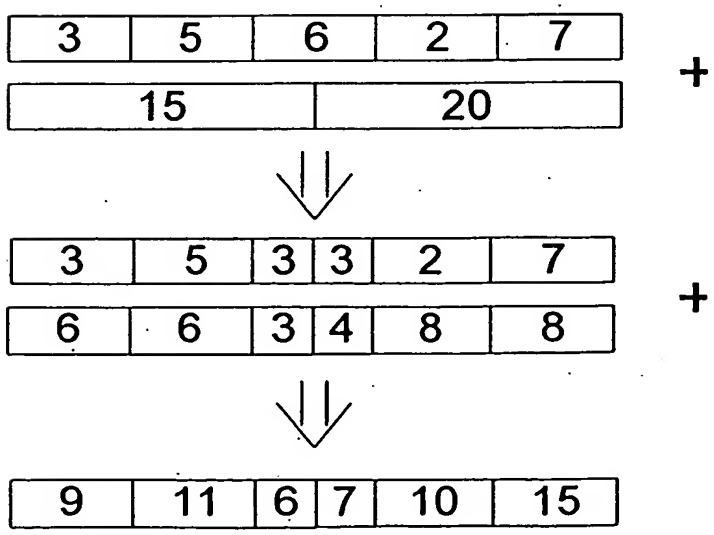


Figure 18

1900

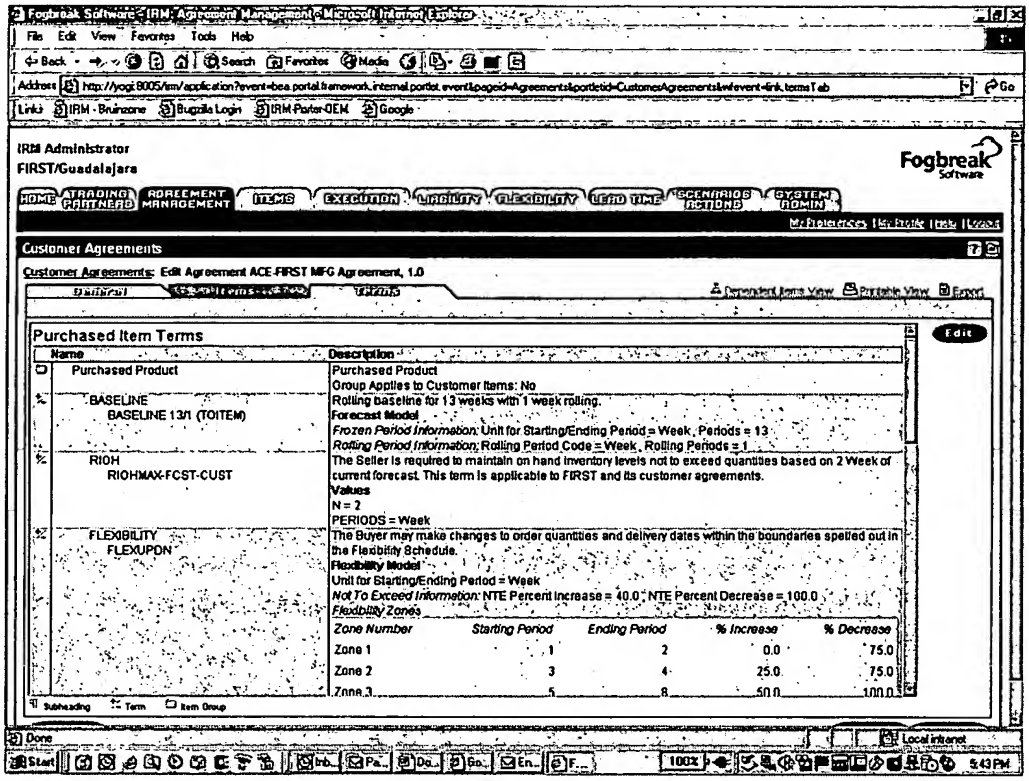


FIGURE 19

2000
C

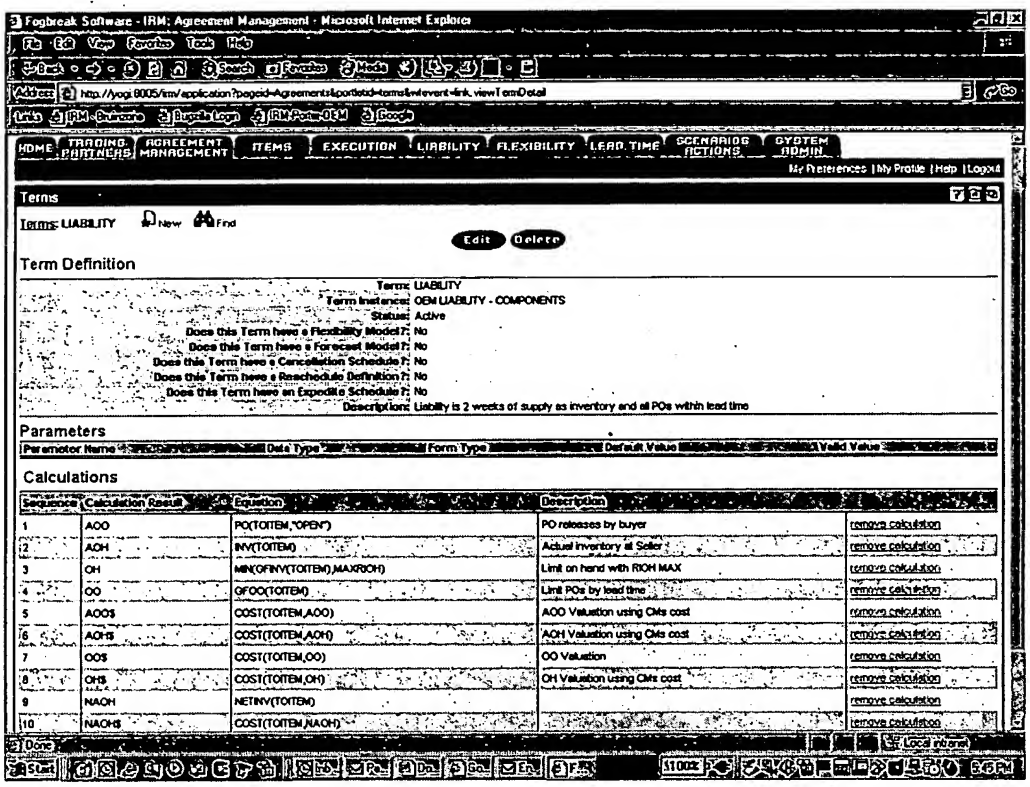
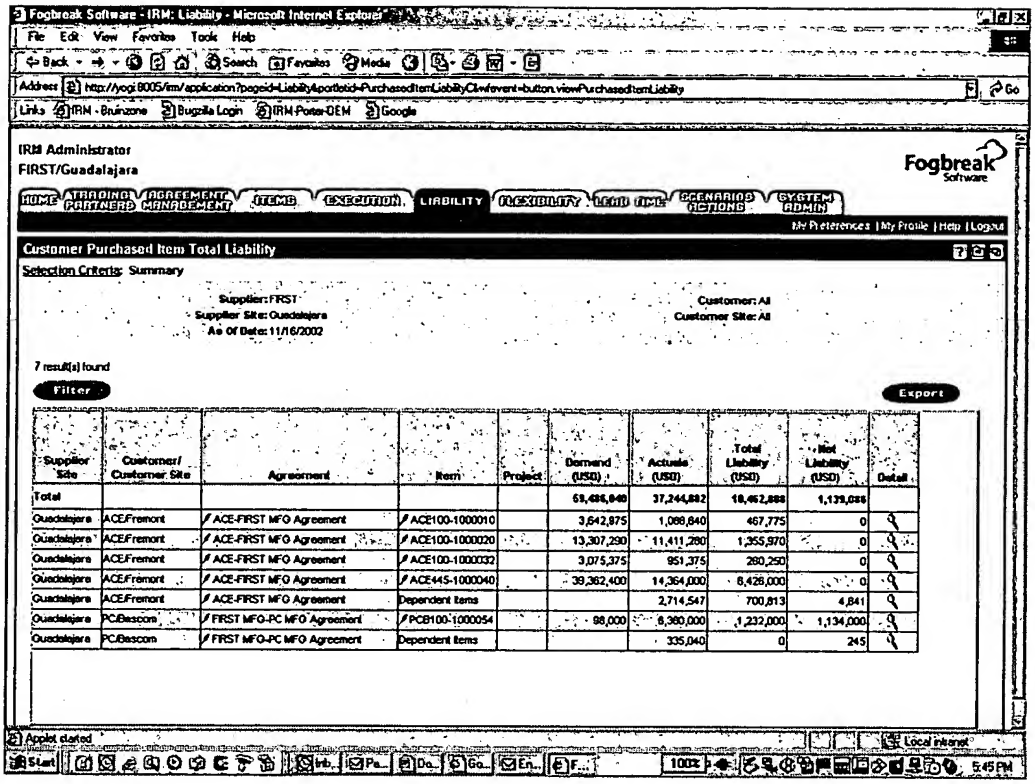


FIGURE 20

2100



Supplier Site	Customer / Customer Site	Agreement	Item	Project	Demand (USD)	Actuals (USD)	Total Liability (USD)	Net Liability (USD)	Detail
Total					59,486,648	37,244,882	18,462,888	1,139,086	
Guadalajara	ACE/Fremont	ACE-FIRST MFG Agreement	ACE100-1000010		3,642,875	1,088,840	467,775	0	
Guadalajara	ACE/Fremont	ACE-FIRST MFG Agreement	ACE100-1000020		13,307,290	11,411,280	1,355,970	0	
Guadalajara	ACE/Fremont	ACE-FIRST MFG Agreement	ACE100-1000032		3,075,375	951,375	280,250	0	
Guadalajara	ACE/Fremont	ACE-FIRST MFG Agreement	ACE445-1000040		39,362,400	14,364,000	8,426,000	0	
Guadalajara	ACE/Fremont	ACE-FIRST MFG Agreement	Dependent Items			2,714,547	700,813	4,841	
Guadalajara	PC/Bascom	FIRST MFG-PC MFG Agreement	PCB100-1000054		98,000	8,380,000	1,232,000	1,134,000	
Guadalajara	PC/Bascom	FIRST MFG-PC MFG Agreement	Dependent Items			335,040	0	245	

FIGURE 21

2200

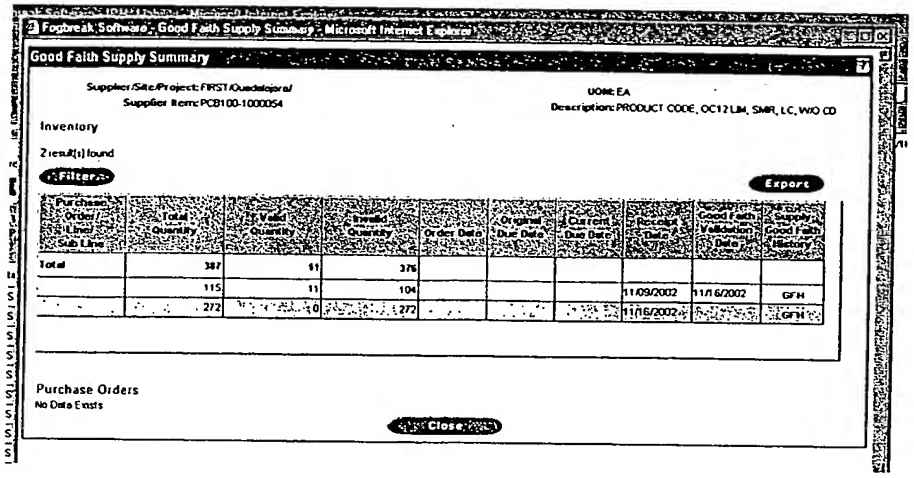


FIGURE 22

2300

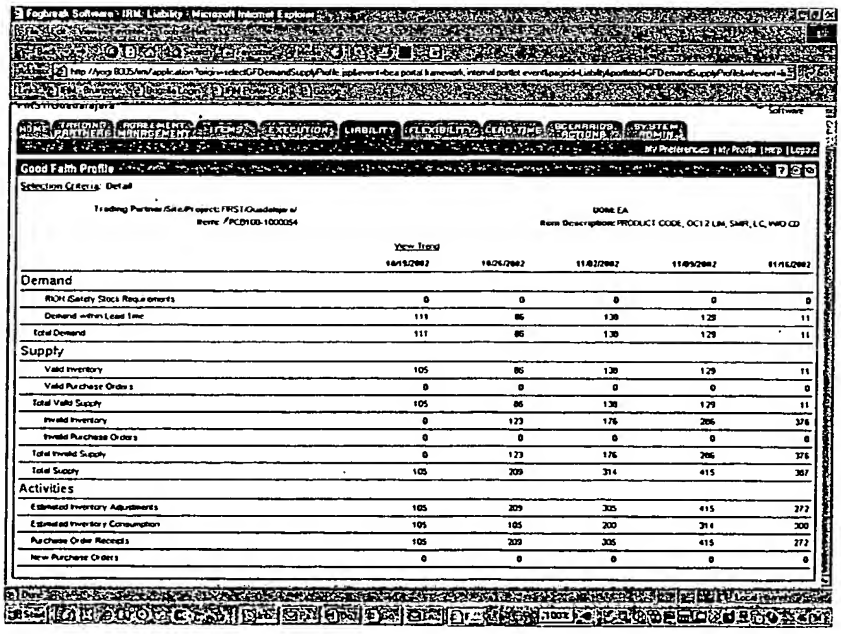


FIGURE 23